

## The Future of **FUTURES RESEARCH**

Jay Forrest, Cindy Frewen Wuellner & Jay Gary



World Future Society, July 30, 2007

### Abstract:

Futures Studies occupies a unique niche in social sciences research and knowledge creation today. Futurists share common methods, including environmental scanning, trend analysis, the Delphi method, scenario planning, extrapolation of time-series, and computer-modeling. But where did its research methods come from? What disciplines and research models shaped the modern futures movement? This session will 1) explore the mental models behind futures thinking from social, political, organizational, and systems theory, 2) discuss how mid-career futurists might improve our practice, and 3) consider how futures research might enhance the specificity and relevance of futures research to organizations.

## The Future of **FUTURES RESEARCH**

- **Jay Forrest, PhD** soon!  
Improving Futures Methods Through Systems Thinking
- **Cindy Frewen, PhD** soon!  
The Art of Urban Futures Research
- **Jay Gary, PhD** candidate!  
Why Futures Studies Needs a Theory Base

<http://www.jaygary.com/futuresresearch.pdf>

### How do we strengthen Futures as...

**Discipline?**



**Basic  
Research**

**Profession?**

**Applied  
Research**

## Profession



World Future Society  
[wfs.org](http://wfs.org)



Association of Professional Futurists  
[profuturists.org](http://profuturists.org)



World Futures Studies Federation  
[wfsf.org](http://wfsf.org)

## Discipline



- **Futures: The journal**  
[http://www.elsevier.com/locate/journaldescription\\_cws\\_home/30422/description#](http://www.elsevier.com/locate/journaldescription_cws_home/30422/description#)
- **Technological Forecasting and Social Change**  
[http://www.elsevier.com/locate/journaldescription\\_cws\\_home/305740/description](http://www.elsevier.com/locate/journaldescription_cws_home/305740/description)
- **Foresight: The journal**  
<http://www.emeraldinsight.com/info/journals/fs/fs.jsp>
- **Futures Research Quarterly**  
<http://www.wfs.org/frq.htm>
- **Journal of Futures Studies**  
<http://www2.ou.edu.tw/~jfs/jfs/>
- **International Journal of Forecasting**  
<http://www.forecasters.org/ijf/>



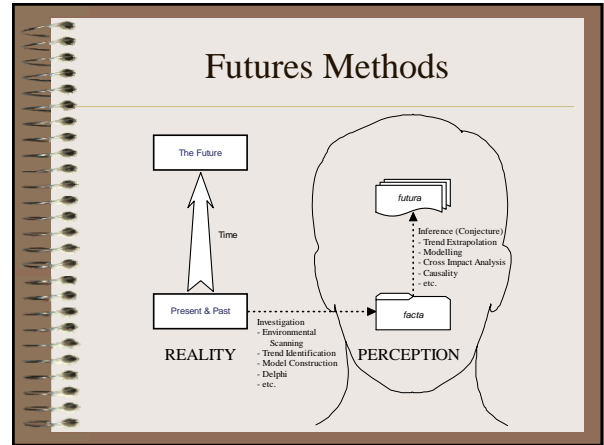
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My Thoughts...

Jay Forrest

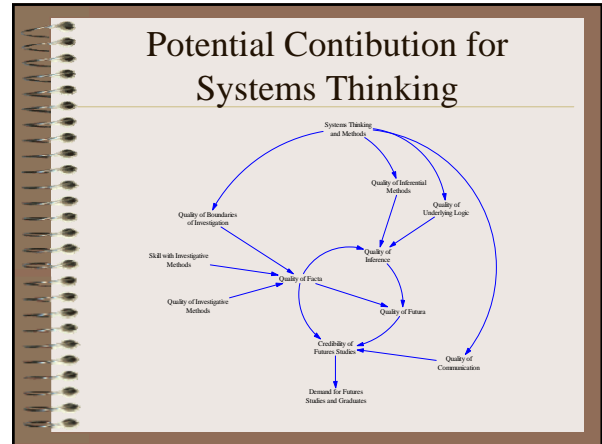
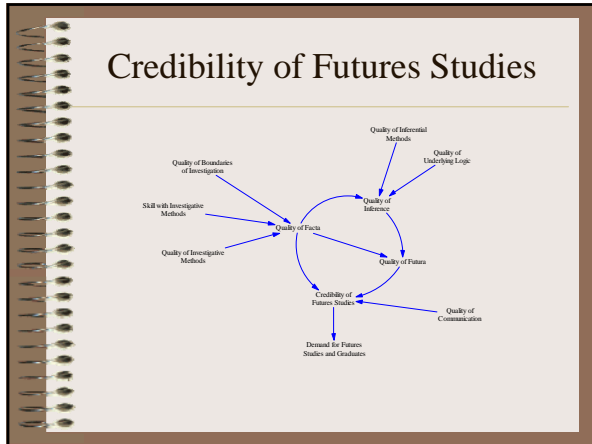


### Putting Rigor in Futures?

- Quantitative Processes?
- Qualitative Processes
- Both?
  - Better Facta
  - Better Conjecture
    - Better Thinking
    - Better Logic
- Better Communication
- Better Demonstration of Value

???

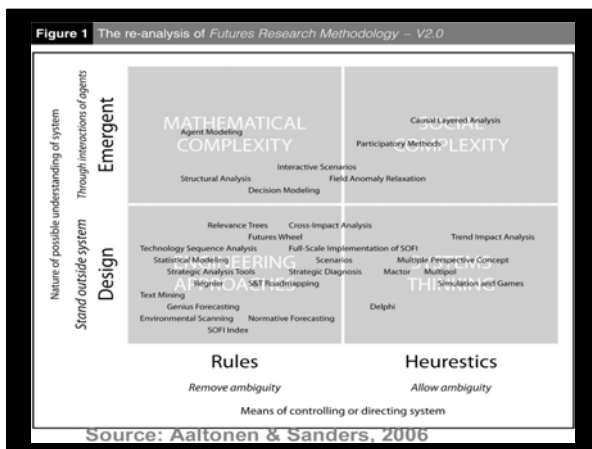
*Systems Thinking Seems  
to Hold Much Potential*



- ### Where Is Systems Thinking?
- Causal loop and influence diagrams consistently show benefits of improved understanding, better communication.
  - Less than 2 percent of articles in Futures use causality or systems concepts or diagrams to explain or discuss the issue at hand.

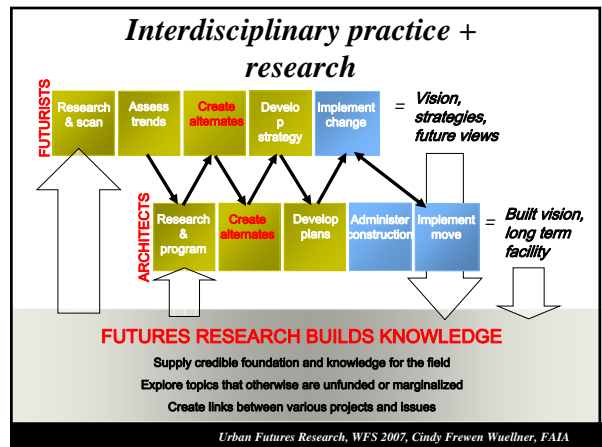
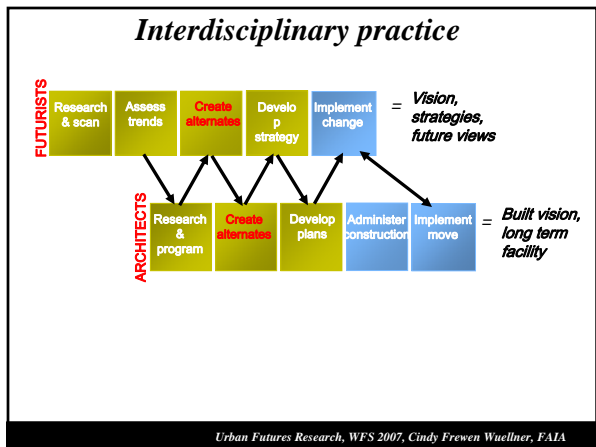
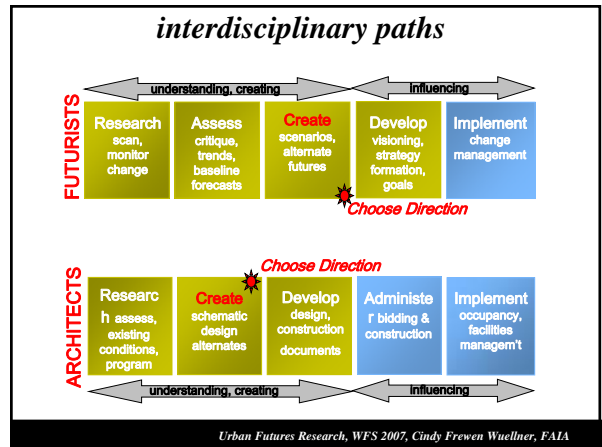
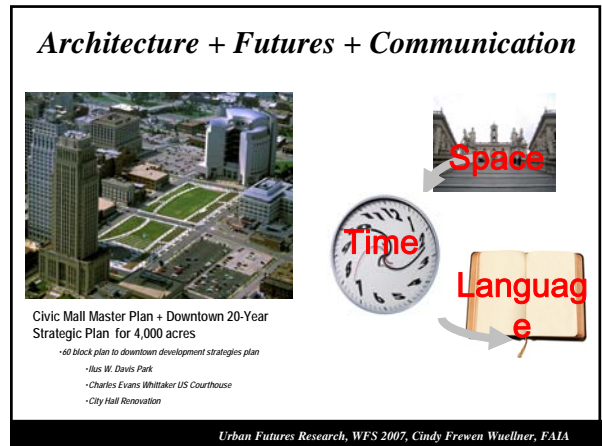
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- 1 Framing
- 2 Scanning
- 3 Forecasting
- 4 Visioning
- 5 Planning
- 6 Acting

Source: Hines & Bishop, Thinking About the Future, 2007

### How Existing “Methods” Fit

<b>Framing</b>	stakeholder analysis, integral (meta-method) issue analysis, critical futures
<b>Scanning</b>	environmental scanning, content analysis, leading/lagging indicators, text mining, trend tracking
<b>Forecasting</b>	bellwether analysis, cross impact analysis, Delphi, emerging issue analysis, framework forecasting, gaming/simulation, historical analogy/pattern recognition, morphological box/field anomaly relaxation, scenarios (2x2, incasting, Manoa, etc), statistical modeling (time series), systems analysis, technology forecasting (TRIZ, roadmapping, patent analysis, etc), trend analysis
<b>Visioning</b>	causal layered analysis, futures wheel, implications analysis, appreciative inquiry, backcasting, creative imagery, visualization, Futures Search
<b>Planning</b>	decision modeling, risk analysis, strategic planning, technology assessment
<b>Acting</b>	action research, change management, coaching, consulting, issues management

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## Why Futures Studies Needs a Theory Base

**Jay Gary**  
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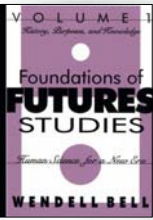
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## The Stepladder of Futures

4. Philosophy
3. Frameworks
2. Theory
1. Methods


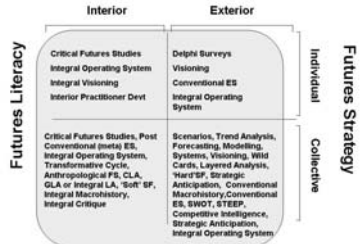
## Philosophy

- 1. Futures studies recognizes that (a) "time is continuous, linear, unidirectional and irreversible," (b) "there is an independent and objective external world," (c) "the future is open—there are opportunities and freedom in directing the future", and (d) "there are better and worse futures."
- 2. Futures studies is concerned with (a) organizing "the most useful knowledge" for "decision making and social action," (b) "increasing democratic participation in imagining and designing the future," and (c) empowering "conscious or decisional human action."



## Frameworks


Dr. Richard Slaughter has proposed a new framework of foresight to reorganize the field from the inside out: "Integral Futures" (<http://www.foresightinternational.com.au>)

The diagram shows a 2x2 matrix with 'Interior' and 'Exterior' on the horizontal axis and 'Futures Literacy' (Individual and Collective) on the vertical axis. The quadrants contain various futures studies approaches.

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## Methods

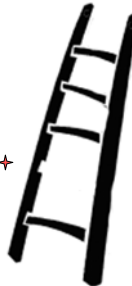


**Table 1** AC/UNU Millennium project taxonomy of Futures Research Methodology - V2.0

Method	Quantitative	Qualitative	Normative	Exploratory
Environmental scanning		X		X
Delphi		X	X	X
Futures wheel		X	X	X
Trend impact analysis	X			X
Cross-impact analysis	X	X		X
Structural analysis	X			X
Systems perspectives		X		X
Decision modeling		X		X
Statistical modeling	X			X
Technology sequence analysis		X	X	
Relevance trees and morphological analysis		X	X	X
Scenarios	X	X	X	X
Interactive scenarios		X	X	X
Participatory methods		X	X	X
Simulation and games		X	X	X
Genius forecasting, vision, intuition		X	X	X
S&T road-mapping		X	X	X
Field anomaly relaxation		X	X	X
Text mining		X	X	X
Agent modeling		X	X	X
SGRI index	X		X	X
Multiple perspective concept		X	X	X
Causal layered analysis		X	X	X

Source: Glenn and Gordon (2003)

## Why Futures Needs a Theory Base



1. Methods
2. Theory *the missing rung!*
3. Frameworks
4. Philosophy

## Example: Anticipatory Leadership



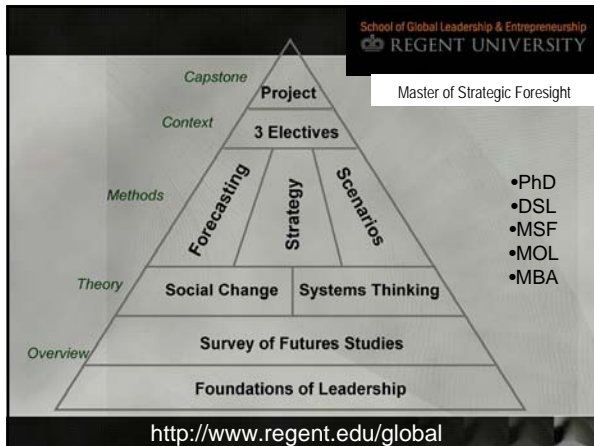
Question	Does anticipatory thinking enhance long-range innovation of groups?
Construct	<ul style="list-style-type: none"> <li>• Futurist: A relentless fascination with the future.</li> <li>• Strategist: An ability to think systemically.</li> <li>• Mensch: Interpersonal skills that motivates great groups.</li> </ul>
Variables	<b>Leader:</b> foresight, complex thinking, inspirational <b>Followers:</b> creative performance
Measurement	<b>Instruments:</b> Environmental Scanning behavior, ENTRE scale, MLQ? <b>Sample:</b> Technology executives, with time span of discretion of 7 years or more

Source: row 1 & 2: Anika Savage & Michael Sales, <http://www.artofthefuture.com/AL.html>

## Borrow, Adapt & Create Foresight Theory

Type	Theory	Source
Framing	Action Science	Argyris & Putnam & Smith, (1985)
	Sensemaking	Daft & Weick (1984)
Scanning	General System Theory	Bertalanffy, (1968)
	Organizational Adaptation	Miles & Snow (1978)
Forecasting	Environmental Scanning	Hambrick, D. C. (1981)
	Probability theory	Rescher (1998)
Visioning	Innovation theory	Rogers, (2003)
	Transformational leadership	Bass & Steidlmeier (1985).
Planning	Hope theory	Snyder, C. R. (1995)
	Decision-making	Simon, H. A. (1997)
Acting	Strategic leadership	Finkelstein, & Hambrick, (1996)
	Planned Behavior theory	Fishbein, & Ajzen, (1975).
	Goal-Setting theory	Locke & Latham, (1990)

Source: Jay Gary, <http://www.jaygary.com>



## Building & Validating Futures Theory

I am concerned that we futurists sometimes fail to test adequately our beliefs and ideas. If our beliefs—even our most cherished beliefs—are wrong, we ought to want to find out that they are indeed wrong. But designing research so as to put ideas at risk, rather than merely seeming to confirm them, is challenging (Bell, 1996, *Futures*, 28, p. 529).

Wendell Bell, PhD

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Philosophy  
Frameworks  
Theory  
Methods

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## How do we strengthen Futures as...

Discipline? Profession?

## The Future of FUTURES RESEARCH

### Break-out Groups

<b>Discipline:</b> PhDs & candidates	<b>Profession:</b> Business consultants
<b>Innovation &amp; Research</b> Anyone	<b>Systems Thinking</b> Anyone